

**REMARKS**

**I. Formalities**

Applicants thank the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of the certified copy of the priority document submitted on May 3, 2004.

Applicants thank the Examiner for considering the references cited with the Information Disclosure Statement filed on December 30, 2004.

Applicants thank the Examiner for indicating that the Formal Drawings filed on December 1, 2003 are accepted.

**II. Status of the Application**

By the present amendment, Applicants add claims 33-36 to more fully cover various implementations of the invention. An Excess Claim Fee Payment Letter is enclosed. Claims 1-36 are all the claims pending in the Application, with claims 1 and 19 being in independent form. Claims 1-32 have been rejected.

The present amendment addresses each point of objection and rejection raised by the Examiner. Favorable reconsideration is respectfully requested.

**III. Claim Rejections under 35 U.S.C. §103 – Schulz in view of Nobis**

The Examiner has rejected claims 1-2, 4-5, 13-14, 17-19, 22-23, 25-26, 29-30 and 32 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,198,877 to Schulz (hereinafter “Schulz”) in view of U.S. Patent No. 6,397,164 to Nobis (hereinafter “Nobis”).

Applicants respectfully traverse these rejections for *at least* the independent reasons stated below.

In order for the Examiner to maintain a rejection under 35 U.S.C. §103, Schulz, Nobis, or some combination thereof, must teach or suggest all of the recitations of claims 1-2, 4-5, 13-14, 17-19, 22-23, 25-26, 29-30 and 32. Applicants respectfully submit that neither Schulz, Nobis, nor any combination thereof, teaches or suggests all of the recitations of claims 1-2, 4-5, 13-14, 17-19, 22-23, 25-26, 29-30 and 32.

**A. Independent Claim 1**

Independent claim 1 requires (among other things):

...projecting light spread over an area with a coding spread over the area onto the face of the wheel from a projecting direction...

The grounds of rejection allege that Figure 1 of Schulz teaches the feature of projecting light spread over an area and that column 9, lines 11-35 of Schulz teaches the feature of projecting light spread over an area with a coding spread over the area, as recited in claim 1. Applicants respectfully disagree with the grounds of rejection.

Schulz fails to teach or suggest the feature of projecting light spread over an area with a coding spread over the area, as recited in claim 1. Indeed, Applicants emphasize that, as recited in claim 1, “the area” over which a coding derives its antecedent basis from the recited “an area,” over which projected light is spread.

However, according to the reasoning provided in the grounds of rejection, the Examiner alleges that the teaching in Schulz that the light beam projecting apparatus 14, which is housed in

the hand held scanner head 12, directs a narrow beam of light or scanning beam 42 onto the surface 40 of object 38 to illuminate a spot 36 on the surface 40, corresponds to the feature of “projecting light spread over an area,” as recited in claim 1. That is, the grounds of rejection allege that the spot 36, corresponds to “an area,” as recited in claim 1.

In addition, the Examiner alleges that column 9, lines 11-35 of Schulz teaches projecting light spread over an area with a coding spread over the area, as recited in claim 1. Applicants disagree. In contrast to the recitations of claim 1, Schulz merely teaches that in order for the detectors 26, 28 and 30 to distinguish which of the pilot light emitters 20, 22 or 24 is “on” or illuminated at any one time, the pilot light emitters 20, 22 or 24 may be strobed or illuminated in sequence. (Column 9, lines 12-18). Alternatively, Schulz teaches that different colors of light could be used in conjunction with detectors capable of distinguishing those particular colors or wavelengths of light. (Column 9, lines 18-23). Finally, Schulz teaches that the respective pilot light emitters 20, 22 and 24 could be modulated with a unique “tone” for each emitter, and that the control unit 32 or the coordinate computer 34 could be programmed to demodulate the tone to determine to which particular emitter the signal belongs. (Column 9, lines 24-29).

However, even assuming *arguendo* that any or all of the features of configuring the pilot light emitters 20, 22 or 24 to strobe, illuminate in sequence, emit different colors, or to be modulated with a unique “tone,” did correspond to “coding,” as recited in claim 1, as alleged in the grounds of rejection (which Applicants firmly submit they do not), Schulz nevertheless fails

to provide any teaching or suggestion whatsoever that the projecting apparatus 14 projects the scanning beam 42 over spot 36<sup>1</sup> with any of such alleged codings.

In fact, as taught in Schulz, the light emitted from the pilot light emitters 20, 22 or 24 is never even projected over spot 36, nor is such light ever reflected to the one-dimensional spot sensors 16 and 18. To the contrary, Schulz teaches that the light emitted from the pilot light emitters 20, 22 or 24 is transmitted to the remotely located pilot light sensors 26, 28 and 30 and not to the surface 40 of object 38 to illuminate a spot 36. (Column 6, lines 1-3; column 6, lines 26-30; Figure 1; Figure 2). Therefore, Schulz cannot possibly teach or suggest that the pilot light emitters 20, 22 or 24 project light spread over the spot 36 with a coding spread over the spot 36. As such, Schulz does not teach, and is incapable of suggesting, the feature of projecting light spread over an area with a coding spread over the area onto the face of the wheel from a projecting direction, as recited in claim 1 (emphasis added).

Further, Nobis fails to remedy the deficient teachings of Schulz. Indeed, Nobis merely teaches that a measuring mark 8 is affixed to a wheel. However, Nobis provides no teaching or suggestion whatsoever regarding projecting light spread over an area with the measuring mark 8 spread over the area. Hence, Applicants respectfully submit that independent claim 1 is patentable over Schulz, Nobis, and any combination thereof, for *at least* these independent reasons.

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<sup>1</sup> The grounds of rejection allege that the light beam projecting apparatus 14, which is housed in the hand held scanner head 12, directs a narrow beam of light or scanning beam 42 onto the surface 40 of object 38 to illuminate a spot 36 on the surface 40, corresponds to the feature of “projecting light spread over an area,” as recited in claim 1.

In addition, Applicants submit that the grounds of rejection have failed to provide a proper motivation to combine the disparate teachings of Schulz and Nobis and that the grounds of rejection have failed to establish even a *prima facie* case of obviousness for *at least* this reason. Indeed, the Examiner bears the initial burden of establishing *prima facie* obviousness. (MPEP § 2142). To establish a *prima facie* case of obviousness the Examiner must first establish that there is some suggestion or motivation, in either the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. (*See* MPEP § 2143).

More particularly, when relying on several references, it is incumbent upon the Examiner to identify some suggestion to combine the references. (*In re Mayne*, 104 F.3d 1339, 41 USPQ2d 1451 (Fed. Cir. 1997)). Here, the grounds of rejection merely allege that “[i]t would have been obvious to modify Schulz to use the object sensing device for axle geometry as taught by Nobis to merely further implement the broad teachings of Schulz with no new or unexpected changes.” (08/10/05 Office Action, page 2). However, such an alleged motivation (i.e., “to merely further implement the broad teachings of Schulz”) is insufficient as a matter of law.

Indeed, such an alleged motivation is insufficient because it fails to identify any evidentiary support that teaches or suggests the desirability of combining the Schulz and Nobis references in the specific manner proposed by the grounds of rejection. It is well-established that in the absence of evidence which suggests the desirability of combining references in a proposed manner, such combination is not available to preclude patentability under 35 U.S.C. § 103. (*See King Instrument Corp. v. Otari Corp.*, 226 U.S.P.Q. 402 (Fed. Cir. 1985)). And, it is incumbent

upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. (In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)). Further, this burden can only be satisfied by an objective teaching in the prior art or by cogent reasoning that the knowledge is available to one of ordinary skill in the art. (In re Lahu, 747 F.2d 703, 223 USPQ 1257 (Fed. Cir. 1984)).

Since the grounds of rejection have failed to identify any teaching or suggestion in the prior art which suggests the desirability of combining Schulz and Nobis, and have failed to provide any evidence supporting a motivation to combine the references, Applicants respectfully submit that independent claim 1 is patentable over Schulz, Nobis, and any combination thereof, for *at least* these independent reasons. Additionally, Applicants submit that the dependent claims 2, 4-5, 13-14 and 17-18 are allowable *at least* by virtue of their dependency. Thus, Applicants respectfully request that the Examiner withdraw these rejections.

**B. Independent Claim 19**

Independent claim 19 recites (among other things):

...a light projection unit which projects  
light spread over an area with a coding spread  
over the area onto the face of the wheel from a  
projecting direction...

In view of the similarity between these requirements and the requirements discussed above with respect to independent claim 1, Applicants respectfully submit that arguments analogous to the foregoing arguments as to the patentability of independent claim 1 demonstrate the patentability of claim 19. As such, it is respectfully submitted that claim 19 is patentably distinguishable over the cited references *at least* for reasons analogous to those presented above.

Further, Applicants submits that the dependent claims 22-23, 25-26, 29-30 and 32 are allowable *at least* by virtue of their dependency on claim 19. Thus, the allowance of these claims is respectfully solicited of the Examiner.

**IV. Claim Rejections under 35 U.S.C. §103 – Schulz in view of Nobis and further in view of Madey**

The Examiner has rejected claims 3 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Schulz, in view of Nobis, and further in view of U.S. Patent No. 5,274,433 to Madey (hereinafter “Madey”). Applicants respectfully traverse these rejections for *at least* the independent reasons stated below.

The dependent claims 3 and 21 incorporate all the novel and non-obvious recitations of their base claims 1 and 19, respectively. As already discussed above, neither Schulz, Nobis, nor any combination thereof, teaches or suggests all the recitations of claims 1 and 19. Further, Madey fails to remedy the deficient teachings of Schulz and Nobis. Therefore, Applicants submit that claims 3 and 21 are patentable over the cited references *at least* by virtue of their dependency on claims 1 and 19, respectively.

**V. Claim Rejections under 35 U.S.C. §103 – Schulz in view of Nobis and further in view of Waldecker**

The Examiner has rejected claims 15 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Schulz, in view of Nobis, and further in view of U.S. Patent No. 4,745,469 to Waldecker (hereinafter “Waldecker”). Applicants respectfully traverse these rejections for *at least* the independent reasons stated below.

The dependent claims 15 and 27 incorporate all the novel and non-obvious recitations of their base claims 1 and 19, respectively. As already discussed above, neither Schulz, Nobis, nor any combination thereof, teaches or suggests all the recitations of claims 1 and 19. Further, Waldecker fails to remedy the deficient teachings of Schulz and Nobis. Therefore, Applicants submit that claims 15 and 27 are patentable over the cited references *at least* by virtue of their dependency on claims 1 and 19, respectively.

**VI. Claim Rejections under 35 U.S.C. §103 – Schulz in view of Nobis and further in view of Chapin**

The Examiner has rejected claims 6, 7 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Schulz, in view of Nobis, and further in view of U.S. Patent No. 5,812,256 to Chapin (hereinafter “Chapin”). Applicants respectfully traverse these rejections for *at least* the independent reasons stated below.

The dependent claims 6, 7 and 8 incorporate all the novel and non-obvious recitations of their base claim 1. As already discussed above, neither Schulz, Nobis, nor any combination thereof, teaches or suggests all the recitations of claim 1. Further, Chapin fails to remedy the deficient teachings of Schulz and Nobis. Therefore, Applicants submit that claims 6, 7 and 8 are patentable over the cited references *at least* by virtue of their dependency on claim 1.

**VII. Claim Rejections under 35 U.S.C. §103 – Schulz in view of Nobis and further in view of Lill**

The Examiner has rejected claims 9-10 and 31 under 35 U.S.C. § 103(a) as being unpatentable over Schulz, in view of Nobis, and further in view of U.S. Patent No. 4,097,157 to



Lill (hereinafter “Lill”). Applicants respectfully traverse these rejections for *at least* the independent reasons stated below.

The dependent claims 9-10 and 31 incorporate all the novel and non-obvious recitations of their base claims 1 and 19, respectively. As already discussed above, neither Schulz, Nobis, nor any combination thereof, teaches or suggests all the recitations of claims 1 and 19. Further, Lill fails to remedy the deficient teachings of Schulz and Nobis. Therefore, Applicants submit that claims 9-10 and 31 are patentable over the cited references *at least* by virtue of their dependency on claims 1 and 19, respectively.

**VIII. Claim Rejections under 35 U.S.C. §103 – Schulz in view of Nobis and further in view of Jackson**

The Examiner has rejected claims 11-12 and 24 under 35 U.S.C. § 103(a) as being unpatentable over Schulz, in view of Nobis, and further in view of U.S. Patent No. 5,969,246 to Jackson (hereinafter “Jackson”). Applicants respectfully traverse these rejections for *at least* the independent reasons stated below.

The dependent claims 11-12 and 24 incorporate all the novel and non-obvious recitations of their base claims 1 and 19, respectively. As already discussed above, neither Schulz, Nobis, nor any combination thereof, teaches or suggests all the recitations of claims 1 and 19. Further, Jackson fails to remedy the deficient teachings of Schulz and Nobis. Therefore, Applicants submit that claims 11-12 and 24 are patentable over the cited references *at least* by virtue of their dependency on claims 1 and 19, respectively.

**IX. Claim Rejections under 35 U.S.C. §103 – Schulz in view of Nobis and further in view of Montani**

The Examiner has rejected claims 16 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Schulz, in view of Nobis, and further in view of U.S. Patent No. 3,376,411 to Montani (hereinafter “Montani”). Applicants respectfully traverse these rejections for *at least* the independent reasons stated below.

The dependent claims 16 and 28 incorporate all the novel and non-obvious recitations of their base claims 1 and 19, respectively. As already discussed above, neither Schulz, Nobis, nor any combination thereof, teaches or suggests all the recitations of claims 1 and 19. Further, Montani fails to remedy the deficient teachings of Schulz and Nobis. Therefore, Applicants submit that claims 16 and 28 are patentable over the cited references *at least* by virtue of their dependency on claims 1 and 19, respectively.

**X. New Claims**

Claims 33-36 are hereby added. Claims 33-36 are fully supported *at least* by paragraphs 013-015 of the instant Application. Claims 33-36 are respectfully submitted to be allowable *at least* by virtue of their dependency.

**XI. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Application No. 10/724,234

Attorney Docket No. Q78613

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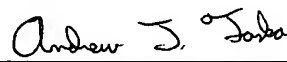
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**23373**

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